Author Index

Backoff, P.M. and Clopton, B.M.
A spectrotemporal analysis of DCN single unit responses to wideband noise in guinea pig (53) 28
Bleich, N., see Pratt, H. (53) 237
Boettcher, F.A., see Gerken, G.M. (53) 101
Brix, J., see Fischer, F.P. (53) 281
Brundin, L., see Canlon, B. (53) 7
Bruns, V., see Dannhof, B.J. (53) 253
Bull, C.L., see Patuzzi, R.B. (53) 57

Canlon, B. and Brundin, L.
Mechanically induced length changes of isolated outer hair cells are metabolically dependent (53) 7
Casero, R.A., see Marks, S.C. (53) 230
Cassell, J.F., see Rajan, R. (53) 153
Clopton, B.M., see Backoff, P.M. (53) 28
Collinge, C. and Schweitzer, L.
Details of the central projections of the cochlear nerve in the hamster revealed by the fluorescent tracer DiI (53) 159

Dannhof, B.J. and Bruns, V.
The organ of Corti in the bat *Hipposideros bicolor* (53) 253
Drescher, D.G., see Khan, K.M. (53) 223

Fischer, F.P., Brix, J., Singer, I. and Miltz, C.
Contacts between hair cells in the avian cochlea (53) 281
Flock, Å., see Karlsson, K.K. (53) 95
Franklin, D.J., Lonsbury-Martin, B.L., Stagner, B.B. and Martin, G.K.
Altered susceptibility of $2f_1 - f_2$ acoustic-distortion products to the effects of repeated noise exposure in rabbits (53) 185

Gerken, G.M., Solecki, J.M. and Boettcher, F.A.
Temporal integration of electrical stimulation of auditory nuclei in normal-hearing and hearing-impaired cat (53) 101

Hatfield, J.S., see Khan, K.M. (53) 223
Heilbronn, E., see Plinkert, P.K. (53) 123
Hellstrom, L.I. and Schmiedt, R.A.
Rate/level functions of auditory-nerve fibers in young and quiet-aged gerbils (53) 217
Henning, G.B., see Zwicker, E. (53) 141
Horner, K.C., see Rydmarker, S. (53) 113
Hunter, K.P., see Willott, J.F. (53) 78

Irvine, D.R.F., see Rajan, R. (53) 153

Karlsson, K.K., Ulfendahl, M., Khanna, S.M. and Flock, Å.
The effects of quinine on the cochlear mechanics in the isolated temporal bone preparation (53) 95
Khan, K.M., Hatfield, J.S. and Drescher, D.G.
Carbohydrates associated with the cell coat surrounding cells of the rainbow trout saccular macula as revealed by lectin probes (53) 223
Khanna, S.M., see Karlsson, K.K. (53) 95
Klinke, R., see Schermuly, L. (53) 49

Lonsbury-Martin, B.L., see Franklin, D.J. (53) 185

Marillaud, A., see Meurice, J.C. (53) 209
Marks, S.C., Mattox, D.E. and Casero, R.A.
The effects of DFMO on polyamine metabolism in the inner ear (53) 230
Martin, G.K., see Franklin, D.J. (53) 185
Mattox, D.E., see Marks, S.C. (53) 230
Meurice, J.C., Paquereau, J. and Marillaud, A.
Same location of the source of P_1 of BAEPs and N_1 of CAP in guinea pig (53) 209
Miltz, C., see Fischer, F.P. (53) 281

Paquereau, J., see Meurice, J.C. (53) 209
Parham, K., see Willott, J.F. (53) 78
Patuzzi, R.B. and Bull, C.L.
Electrical responses from the chicken basilar papilla (53) 57
Peake, W.T. and Rosowski, J.J.
Impedance matching, optimum velocity, and ideal middle ears (53) 1
Phillips, D.P. and Sark, S.A.
Separate mechanisms control spike numbers and interspike intervals in transient responses of cat auditory cortex neurons (53) 17
Plinkert, P.K., Zenner, H.P. and Heilbronn, E.
A nicotinic acetylcholine receptor-like α-bungarotoxin-binding site on outer hair cells (53) 123
Pratt, H., Zaaroor, M., Bleich, N. and Starr, A.
Effects of myelin or cell body brainstem lesions on 3-channel Lissajous' trajectories of feline auditory brainstem evoked potentials (53) 237

Rajan, R., Irvine, D.R.F. and Cassell, J.F.
Normative N_1 audiogram data for the barbiturate-anaesthetised domestic cat (53) 153
Raphael, Y.
Pure-tone overstimulation protects surviving avian hair cells from acoustic trauma (53) 173

Relkin, E.M. and Smith, R.L.
Forward masking of the compound action potential: Thresholds for the detection of the N_1 peak (53) 131
Richardson, G.P. and Russell, I.J.
Cochlear cultures as a model system for studying aminoglycoside induced ototoxicity (53) 293
Rosowski, J.J., see Peake, W.T. (53) 1
Russell, I.J., see Richardson, G.P. (53) 293
Rydmarker, S. and Horner, K.C.
Atrophy of outer hair cell stereocilia and hearing loss in hydropic cochleae (53) 113

Sark, S.A., see Phillips, D.P. (53) 17
Schermuly, L., Topp, G. and Klinke, R.
A previously unknown hair cell epithelium in the pigeon cochlea: The papilla chaotica (53) 49
Schmiedt, R.A., see Hellstrom, L.I. (53) 217
Schweitzer, L., see Collinge, C. (53) 159
Shapiro, S.M.
Binaural effects in brainstem auditory evoked potentials of jaundiced Gunn rats (53) 41
Singer, I., see Fischer, F.P. (53) 281
Smith, R.L., see Relkin, E.M. (53) 131
Solecki, J.M., see Gerken, G.M. (53) 101
Stagner, B.B., see Franklin, D.J. (53) 185
Starr, A., see Pratt, H. (53) 237

Topp, G., see Schermuly, L. (53) 49

Ulfendahl, M., see Karlsson, K.K. (53) 95

Whitehead, M.L.
Slow variations of the amplitude and frequency of spontaneous otoacoustic emissions (53) 269
Willott, J.F., Parham, K. and Hunter, K.P.
Comparison of the auditory sensitivity of neurons in the cochlear nucleus and inferior colliculus of young and aging C57BL/6J and CBA/J mice (53) 78

Zaaroor, M., see Pratt, H. (53) 237
Zenner, H.P., see Plinkert, P.K. (53) 123
Zwicker, E. and Henning, G.B.
On the effect of interaural phase differences on loudness (53) 141

Subject Index

Acoustic trauma
Chick; Hair cell; Tectorial membrane; Protection; Actin (Raphael, Y. (53) 173)

Actin
Chick; Acoustic trauma; Hair cell; Tectorial membrane; Protection (Raphael, Y. (53) 173)

Age-related hearing loss
Cochlear nucleus; Mice; Presbycusis; Tuning curves (Willott, J.F. (53) 78)

Aging
Rate/level function; Auditory nerve; Gerbil; Compound action potential; Presbyacusis (Hellstrom, L.I. (53) 217)

Aminoglycoside antibiotics
Cochlear cultures; Ototoxicity (Richardson, G.P. (53) 293)

Amplitude variations
Spontaneous otoacoustic emissions; Frequency variations; Contralateral ear (Whitehead, M.L. (53) 269)

Auditory brainstem evoked potentials
3CLT; Myelin lesions; Neuronal lesions; Cochlear nucleus; Superior olivary complex; Trapezoid body (Pratt, H. (53) 237)

Auditory cortex
Single neuron; Transient response; Spike timing; Inter-spike interval (Phillips, D.P. (53) 17)

Auditory nerve
Compound action potential; Forward masking; Detection; Threshold (Relkin, E.M. (53) 131)

Rate/level function; Gerbil; Aging; Compound action potential; Presbyacusis (Hellstrom, L.I. (53) 217)

Basilar papilla
Chicken; Hair cell; Tuning (Patuzzi, R.B. (53) 57)

Bat
Cochlea; Morphometry; *Hipposideros* (Dannhof, B.J. (53) 253)

Behavioral thresholds
$2f_1 - f_2$ distortion-product otoacoustic emissions; Noise exposure; Susceptibility/resistance; Rabbit (Franklin, D.J. (53) 185)

Bilirubin
Binaural; Brainstem; Evoked potentials, auditory; Gunn rat; Jaundice (Shapiro, S.M. (53) 41)

Binaural
Bilirubin; Brainstem; Evoked potentials, auditory; Gunn rat; Jaundice (Shapiro, S.M. (53) 41)

Binaural loudness
Partial masking; Interaural phase difference (Zwicker, E. (53) 141)

Bird
Cochlea; Hair cell; Cell contact (Fischer, F.P. (53) 281)

Brainstem
Bilirubin; Binaural; Evoked potentials, auditory; Gunn rat; Jaundice (Shapiro, S.M. (53) 41)

Brainstem auditory evoked potentials
Guinea pig; Lesion; Compound action potential; Cochlear nerve; Generators (Meurice, J.C. (53) 209)

Cat
Temporal integration; Sound-induced hearing loss; Electrical stimulation; Inferior colliculus; Cochlear nucleus (Gerken, G.M. (53) 101)

Cell coat
Lectin binding; Saccular macula; *Salmo gairdneri* (Khan, K.M. (53) 223)

Cell contact
Bird; Cochlea; Hair cell (Fischer, F.P. (53) 281)

Chick
Acoustic trauma; Hair cell; Tectorial membrane; Protection; Actin (Raphael, Y. (53) 173)

Chicken
Basilar papilla; Hair cell; Tuning (Patuzzi, R.B. (53) 57)

3CLT
Auditory brainstem evoked potentials; Myelin lesions; Neuronal lesions; Cochlear nucleus; Superior olivary complex; Trapezoid body (Pratt, H. (53) 237)

Cochlea
Motility; Metabolism; Outer hair cells (Canlon, B. (53) 7)

Inner ear; Efferent innervation; Hearing; Motility; Cytoskeleton (Plinkert, P.K. (53) 123)

Morphometry; Bat; *Hipposideros* (Dannhof, B.J. (53) 253)

Bird; Hair cell; Cell contact (Fischer, F.P. (53) 281)

Cochlear cultures
Aminoglycoside antibiotics; Ototoxicity (Richardson, G.P. (53) 293)

Cochlear mechanics
Hearing loss; Outer hair cells; Quinine; Contraction (Karlsson, K.K. (53) 95)

Cochlear nerve
Cochlear nucleus; DiI; Tonotopic; Olivocochlear (Collinge, C. (53) 159)

Guinea pig; Lesion; Brainstem auditory evoked potentials; Compound action potential; Generators (Meurice, J.C. (53) 209)

Cochlear nucleus
Age-related hearing loss; Mice; Presbycusis; Tuning curves (Willott, J.F. (53) 78)

Temporal integration; Sound-induced hearing loss; Electrical stimulation; Inferior colliculus; Cat (Gerken, G.M. (53) 101)

Cochlear nerve; DiI; Tonotopic; Olivocochlear (Collinge, C. (53) 159)

Auditory brainstem evoked potentials; 3CLT; Myelin lesions; Neuronal lesions; Superior olivary complex; Trapezoid body (Pratt, H. (53) 237)

Compound action potential
Auditory nerve; Forward masking; Detection; Threshold (Relkin, E.M. (53) 131)

Guinea pig; Lesion; Brainstem auditory evoked potentials; Cochlear nerve; Generators (Meurice, J.C. (53) 209)

Rate/level function; Auditory nerve; Gerbil; Aging; Presbyacusis (Hellstrom, L.I. (53) 217)

Contraction
Hearing loss; Cochlear mechanics; Outer hair cells; Quinine (Karlsson, K.K. (53) 95)

Contralateral ear
Spontaneous otoacoustic emissions; Frequency variations; Amplitude variations (Whitehead, M.L. (53) 269)

Cytoskeleton
Inner ear; Efferent innervation; Hearing; Cochlea; Motility (Plinkert, P.K. (53) 123)

Detection
Compound action potential; Auditory nerve; Forward masking; Threshold (Relkin, E.M. (53) 131)

Difluoromethylornithine
Polyamine metabolism; Hearing loss; Ornithine decarboxylase; Guinea pigs (Marks, S.C. (53) 230)

DiI
Cochlear nerve; Cochlear nucleus; Tonotopic; Olivocochlear (Collinge, C. (53) 159)

Dorsal cochlear nucleus
Spectrotemporal analysis; Receptive field; Noise; Guinea pig (Backoff, P.M. (53) 28)

Efferent innervation
Inner ear; Hearing; Cochlea; Motility; Cytoskeleton (Plinkert, P.K. (53) 123)

Electrical stimulation
Temporal integration; Sound-induced hearing loss; Inferior colliculus; Cochlear nucleus; Cat (Gerken, G.M. (53) 101)

Equilibrium
Pigeon; Hair cell; Hearing (Schermuly, L. (53) 49)

Evoked potentials, auditory
Bilirubin; Binaural; Brainstem; Gunn rat; Jaundice (Shapiro, S.M. (53) 41)

$2f_1 - f_2$ distortion-product otoacoustic emissions
Behavioral thresholds; Noise exposure; Susceptibility/resistance; Rabbit (Franklin, D.J. (53) 185)

Forward masking
Compound action potential; Auditory nerve; Detection; Threshold (Relkin, E.M. (53) 131)

Frequency variations
Spontaneous otoacoustic emissions; Amplitude variations; Contralateral ear (Whitehead, M.L. (53) 269)

Generators
Guinea pig; Lesion; Brainstem auditory evoked potentials; Compound action potential; Cochlear nerve (Meurice, J.C. (53) 209)

Gerbil
Rate/level function; Auditory nerve; Aging; Compound action potential; Presbyacusis (Hellstrom, L.I. (53) 217)

Guinea pig
Spectrotemporal analysis; Receptive field; Dorsal cochlear nucleus; Noise (Backoff, P.M. (53) 28)

Lesion; Brainstem auditory evoked potentials; Compound action potential; Cochlear nerve; Generators (Meurice, J.C. (53) 209)

Difluoromethylornithine; Polyamine metabolism; Hearing loss; Ornithine decarboxylase (Marks, S.C. (53) 230)

Gunn rat
Bilirubin; Binaural; Brainstem; Evoked potentials, auditory; Jaundice (Shapiro, S.M. (53) 41)

Hair cell
Pigeon; Hearing; Equilibrium (Schermuly, L. (53) 49)

Chicken; Basilar papilla; Tuning (Patuzzi, R.B. (53) 57)

Chick; Acoustic trauma; Tectorial membrane; Protection; Actin (Raphael, Y. (53) 173)

Bird; Cochlea; Cell contact (Fischer, F.P. (53) 281)

Hearing
Pigeon; Hair cell; Equilibrium (Schermuly, L. (53) 49)

Inner ear; Efferent innervation; Cochlea; Motility; Cytoskeleton (Plinkert, P.K. (53) 123)

Hearing loss
Cochlear mechanics; Outer hair cells; Quinine; Contraction (Karlsson, K.K. (53) 95)

Hydrops; Menière's disease; Morphology; Scanning electron microscopy; Stereocilia (Rydmarker, S. (53) 113)

Difluoromethylornithine; Polyamine metabolism; Ornithine decarboxylase; Guinea pigs (Marks, S.C. (53) 230)

Hipposideros
Cochlea; Morphometry; Bat (Dannhof, B.J. (53) 253)

Hydrops
Hearing loss; Menière's disease; Morphology; Scanning electron microscopy; Stereocilia (Rydmarker, S. (53) 113)

Ideal ears
Impedance matching (Peake, W.T. (53) 1)

Impedance matching
Ideal ears (Peake, W.T. (53) 1)

Inferior colliculus
Temporal integration; Sound-induced hearing loss; Electrical stimulation; Cochlear nucleus; Cat (Gerken, G.M. (53) 101)

Inner ear
Efferent innervation; Hearing; Cochlea; Motility; Cytoskeleton (Plinkert, P.K. (53) 123)

Interaural phase difference
Binaural loudness; Partial masking (Zwicker, E. (53) 141)

Inter-spike interval
Auditory cortex; Single neuron; Transient response; Spike timing (Phillips, D.P. (53) 17)

Jaundice
Bilirubin; Binaural; Brainstem; Evoked potentials, auditory; Gunn rat (Shapiro, S.M. (53) 41)

Lectin binding
Cell coat; Saccular macula; *Salmo gairdneri* (Khan, K.M. (53) 223)

Lesion
Guinea pig; Brainstem auditory evoked potentials; Compound action potential; Cochlear nerve; Generators (Meurice, J.C. (53) 209)

Menière's disease
Hearing loss; Hydrops; Morphology; Scanning electron microscopy; Stereocilia (Rydmarker, S. (53) 113)

Metabolism
Cochlea; Motility; Outer hair cells (Canlon, B. (53) 7)

Mice
Age-related hearing loss; Cochlear nucleus; Presbycusis; Tuning curves (Willott, J.F. (53) 78)

Morphology
Hearing loss; Hydrops; Menière's disease; Scanning electron microscopy; Stereocilia (Rydmarker, S. (53) 113)

Morphometry
Cochlea; Bat; *Hipposideros* (Dannhof, B.J. (53) 253)

Motility
Cochlea; Metabolism; Outer hair cells (Canlon, B. (53) 7)

Inner ear; Efferent innervation; Hearing; Cochlea; Cytoskeleton (Plinkert, P.K. (53) 123)

Myelin lesions
Auditory brainstem evoked potentials; 3CLT; Neuronal lesions; Cochlear nucleus; Superior olivary complex; Trapezoid body (Pratt, H. (53) 237)

Neuronal lesions
Auditory brainstem evoked potentials; 3CLT; Myelin lesions; Cochlear nucleus; Superior olivary complex; Trapezoid body (Pratt, H. (53) 237)

Noise
Spectrotemporal analysis; Receptive field; Dorsal cochlear nucleus; Guinea pig (Backoff, P.M. (53) 28)

Noise exposure
Behavioral thresholds; $2f_1 - f_2$ distortion-product otoacoustic emissions; Susceptibility/resistance; Rabbit (Franklin, D.J. (53) 185)

Olivocochlear
Cochlear nerve; Cochlear nucleus; DiI; Tonotopic (Collinge, C. (53) 159)

Ornithine decarboxylase
Difluoromethylornithine; Polyamine metabolism; Hearing loss; Guinea pigs (Marks, S.C. (53) 230)

Ototoxicity
Cochlear cultures; Aminoglycoside antibiotics (Richardson, G.P. (53) 293)

Outer hair cells
Cochlea; Motility; Metabolism (Canlon, B. (53) 7)

Hearing loss; Cochlear mechanics; Quinine; Contraction (Karlsson, K.K. (53) 95)

Partial masking
Binaural loudness; Interaural phase difference (Zwicker, E. (53) 141)

Pigeon
Hair cell; Hearing; Equilibrium (Schermuly, L. (53) 49)

Polyamine metabolism
Difluoromethylornithine; Hearing loss; Ornithine decarboxylase; Guinea pigs (Marks, S.C. (53) 230)

Presbyacusis
Rate/level function; Auditory nerve; Gerbil; Aging; Compound action potential (Hellstrom, L.I. (53) 217)

Presbycusis
Age-related hearing loss; Cochlear nucleus; Mice; Tuning curves (Willott, J.F. (53) 78)

Protection
Chick; Acoustic trauma; Hair cell; Tectorial membrane; Actin (Raphael, Y. (53) 173)

Quinine
Hearing loss; Cochlear mechanics; Outer hair cells; Contraction (Karlsson, K.K. (53) 95)

Rabbit
Behavioral thresholds; $2f_1 - f_2$ distortion-product otoacoustic emissions; Noise exposure; Susceptibility/resistance (Franklin, D.J. (53) 185)

Rate/level function
Auditory nerve; Gerbil; Aging; Compound action potential; Presbyacusis (Hellstrom, L.I. (53) 217)

Receptive field
Spectrotemporal analysis; Dorsal cochlear nucleus; Noise; Guinea pig (Backoff, P.M. (53) 28)

Saccular macula
Cell coat; Lectin binding; *Salmo gairdneri* (Khan, K.M. (53) 223)

Salmo gairdneri
Cell coat; Lectin binding; Saccular macula (Khan, K.M. (53) 223)

Scanning electron microscopy
Hearing loss; Hydrops; Menière's disease; Morphology; Stereocilia (Rydmarker, S. (53) 113)

Single neuron
Auditory cortex; Transient response; Spike timing; Inter-spike interval (Phillips, D.P. (53) 17)

Sound-induced hearing loss
Temporal integration; Electrical stimulation; Inferior colliculus; Cochlear nucleus; Cat (Gerken, G.M. (53) 101)

Spectrotemporal analysis
Receptive field; Dorsal cochlear nucleus; Noise; Guinea pig (Backoff, P.M. (53) 28)

Spike timing
Auditory cortex; Single neuron; Transient response; Inter-spike interval (Phillips, D.P. (53) 17)

Spontaneous otoacoustic emissions
Frequency variations; Amplitude variations; Contralateral ear (Whitehead, M.L. (53) 269)

Stereocilia
Hearing loss; Hydrops; Menière's disease; Morphology; Scanning electron microscopy (Rydmarker, S. (53) 113)

Superior olivary complex
Auditory brainstem evoked potentials; 3CLT; Myelin lesions; Neuronal lesions; Cochlear nucleus; Trapezoid body (Pratt, H. (53) 237)

Susceptibility/resistance
Behavioral thresholds; $2f_1 - f_2$ distortion-product otoacoustic emissions; Noise exposure; Rabbit (Franklin, D.J. (53) 185)

Tectorial membrane
Chick; Acoustic trauma; Hair cell; Protection; Actin (Raphael, Y. (53) 173)

Temporal integration
Sound-induced hearing loss; Electrical stimulation; Inferior colliculus; Cochlear nucleus; Cat (Gerken, G.M. (53) 101)

Threshold
Compound action potential; Auditory nerve; Forward masking; Detection (Relkin, E.M. (53) 131)

Tonotopic
Cochlear nerve; Cochlear nucleus; DiI; Olivocochlear (Collinge, C. (53) 159)

Transient response
Auditory cortex; Single neuron; Spike timing; Inter-spike interval (Phillips, D.P. (53) 17)

Trapezoid body
Auditory brainstem evoked potentials; 3CLT; Myelin lesions; Neuronal lesions; Cochlear nucleus; Superior olivary complex (Pratt, H. (53) 237)

Tuning
Chicken; Basilar papilla; Hair cell (Patuzzi, R.B. (53) 57)

Tuning curves
Age-related hearing loss; Cochlear nucleus; Mice; Presbycusis (Willott, J.F. (53) 78)